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**United States Patent** [19][11] **Patent Number:** **5,941,551****Harman et al.**[45] **Date of Patent:** **Aug. 24, 1999**[54] **EZ HITCH***Primary Examiner—Ed L. Swinehart*

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[57] **ABSTRACT**

This is an improved trailer hitch apparatus which is self-aligning and essentially self-connecting, and which allows for maximum horizontal and vertical movement of the towed vehicle relative to the towing vehicle. The device includes a plurality of connected guide walls which converge into a spherical housing, having a circular opening at the point of convergence, and a double ring coupler device, which is attached to a standard trailer tongue, having an inner and outer annulus-shaped ring, formed so that the outer ring is a rigid extension of the trailer tongue and the inner ring rotates freely within the said outer ring. The spherical housing device is attached to the interior channel of a standard trailer hitch and when the towing vehicle is backed toward the trailer, the guide walls capture the double ring coupler device, and slides into the spherical housing, and is secured by a coupler pin, which is inserted through the spherical housing vertically through the inner and outer rings.

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[51] Int. Cl.<sup>6</sup> ..... B60D 13/00

[52] U.S. Cl. .... 280/494; 280/477

[58] Field of Search ..... 280/477, 492, 280/494, 515, 491.5

[56] **References Cited****U.S. PATENT DOCUMENTS**

2,441,285	5/1948	Pfeiffer	280/477
4,225,149	9/1980	Koopman	280/477
4,585,133	4/1986	Cope	280/477
5,549,316	8/1996	Jones	280/477

**1 Claim, 4 Drawing Sheets**